

A conceptual systems approach to study policy product integration: a research note

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Abstract

Purpose – Policy integration has gained a lot of attention in the past few decades; however, many existing studies focus on policy process integration, and much fewer on policy product integration (based on the policy content or designs themselves), which is due to a lack of valid and reliable methods. This research provides insights into a conceptual systems perspective to study policy product integration from a policy design-as-content perspective. The argument is that policy content is an abstractable unit of analysis in policy design and integration, making it amenable to the systems-based integrative propositional analysis (IPA) method, which studies policy content and their interactions as conceptual systems. The theoretical point of departure is that there are deep structural similarities between the domains of systems (including physical, conceptual, social, etc.) and that the insights of one system allow for similarities to be exploited and transferred to understanding the other.

Design/methodology/approach – The systems-based IPA is used in an illustrative case study of three Nigerian policies that are aligned to nutrition, which enables policy interaction assessments and the building of policy landscapes (integrated conceptually) based on the mapping capabilities enabled by the IPA.

Findings – Using the illustrative case study of three Nigerian policies aligned to nutrition, preliminary findings suggest that: (1) the propositions in policy content provide a “universal language” to facilitate policy product integration, (2) there are various modes of interaction between policies in a policy landscape and (3) there are various degrees of integration based on the structure of the policy landscape.

Practical implications – When developing policies, the policy interaction based on the mapping of policy statements into a larger system of interaction, the policy landscape, is useful throughout the public policy process, providing some diagnostic and descriptive insights for policy makers.

Originality/value – This systems-based analysis of policy product integration using the IPA provides a methodology to study the interactions of policies and develop a policy landscape (integrated policy map) of various policies, which has not been possible with current approaches.

Keywords Policy product integration, Conceptual systems, Integrative propositional analysis (IPA), Policy coordination, Policy design, Policy mix

Paper type Viewpoint

Introduction and background

In the progression of the field, policy integration has been divided into two analytical domains: (1) *policy process integration*, focusing on the structural and procedural setup of the policy-making system and (2) *policy product integration* (content), both focusing on integration of cross-cutting policies – where each might occur vertically and horizontally (Knill *et al.*, 2020, also see Kaplaner *et al.*, 2023, p. 5). The importance for this paper is the latter, because to cope with complexity, governments are required to streamline and reconcile their product of policy-making (Knill *et al.*, 2021), considering the adjacent policy subsystems and be aware of policies’ cross-sectorial implications. The problem, however, is that many studies focus on policy process integration and neglect the study of policy product integration using reliable and valid methods or approaches (de Wee and Ramolobe, 2025).



This paper attempts to overcome this problem by responding to Knill *et al.* (2021), who stated that, first and foremost, the content of policies should be the focus of analysis in the hope for improvement. Earlier, Peters (1998) asserted that policy integration should be pushed to the forefront of policy design. This paper adopts a policy design perspective for its analysis, focusing on the policy content or the actual product (noun) (Howlett and Rayner, 2018; Siddiki, 2020; Linder and Peters, 1988). Migone and Howlett (2024, p. 810) state that “many questions remain . . . such as how precisely to measure complex interconnections among policy objectives, means, and instruments within a policy mix to better analyse and design public policies”. de Wee *et al.* (2024) suggest that the answer, at least from a policy content perspective, lies in the valuable insights from systems approaches – in this case, studying policy content as conceptual systems.

Contributing to the existing literature, this paper proposes systems thinking, which according to van Der Heijden (2022, p. 1), includes system science and systems theory, which is a broad class of analytical tools and approaches that aim to map, explore and interrogate the behaviour and outcomes of various systems. In this class is also the idea of conceptual systems, which according to Wallis (2016, p. 579) is any form of theory, programme theories, policy model or policy, which is made up of a set of sentences, propositions. de Wee (2024) identifies these as statements or directives in the case of policies which are found in the various components of a policy mix, such as the goals, means, objectives and instruments – that interact across various departments or policy domains and penetrate various levels of government. de Wee *et al.* (2024) make the case that because of the structural similarities between systems, these insights can be exploited for understanding other systems, in this case, how policy product integration can be studied based on the system-theoretic integrative propositional analysis (IPA) methodology and conceptual systems.

The IPA method (Wallis, 2016; de Wee, 2024) is used in this paper as a means to map the various policy statements or directives, to develop the system (concepts and their interactions/relations), both within, and across systems or policy subsystems. Wallis (2019) developed the IPA to study the integration of theory, and this paper adopt his analytical perspective to study policy product integration. This systems-theoretical and IPA methodological perspective is also motivated, in part, because of the observation by Kaplaner *et al.* (2023, p. 4) that when it comes to the measurement and empirical assessment of policy integration, it can be seen as a latent concept, which means that it “cannot be observed directly or measured with a single indicator, but rather in the completeness of combining measures”. To this end, the objective of this paper is to *conduct and present a preliminary exploration of the study of policy integration from a conceptual systems (policy design) perspective, with the aim to use systems-theoretic concepts to understand the interactions of policies from different subsystems and the implications for real-world governance.*

In order to achieve this, this paper utilises an illustrative case study of 3 Nigerian policies aligned to nutrition in which the IPA is applied to build policy maps, which allows for policy interaction assessment of the systems integration between the different policies. According to de Wee *et al.* (2024, p. 2) “studying policy design content as a conceptual system allows an abstractable unit of analysis for analysing the structural logic of a policy design” and they later call scholars to “focus more closely on policy integration”. They argue that “. . . the IPA allows for mapping policy propositions (statements interactions), which allows for building a landscape of a particular policy subsystem with all goals, instruments, and targets as abstract concepts, and how they interact . . . (but also) measuring the total interaction and structure of the ‘integrated policy design’” (de Wee *et al.*, 2024, p. 12). The IPA as a method provides a “common language” between all policies because they are essentially conceptual systems, in which “individual policies” can be seen as conceptual system 1, 2 and so on and their integration the larger policy landscape.

Policy design and policy integration: establishing the unit of analysis

The aim of this paper is to explore and present the IPA as a method for studying policy integration from a conceptual systems perspective, focussing on policy designs as content.

Therefore, it is important to conceptualise policy design and policy integration. In the 1980s, debate in the policy sciences led to a conceptual split between the actual process of policy-making, in the analytical sense and was distinct from the abstract concept of policy design as content (Linder and Peters, 1988). This established two separate analytical domains, which would be later defined through the heuristic: policy design as “verb”, which is the process of creating a policy, and “noun”, which is the actual product or artefact or content (May, 2003) or policy designing and policy designs themselves (Siddiki, 2020). This paper is embedded in policy design as content (designs themselves) tradition in which scholars developed various approaches and methods to study the policy content (See Siddiki, 2020 or de Wee, 2024 for historical background). These approaches and methods, however, focus on the policy content of individual policies. This is an important problem and will return to this later.

In the progression of the policy integration literature, policy integration was also conceptually split, with scholars studying it from various approaches. These are policy process integration and policy product integration. Policy process integration focuses specifically on the broader system of policy-making and its functioning in different policy sectors and how best to integrate and manage different institutions and their relations and the interlinkages between them (Knill *et al.*, 2021). The policy product integration approach is focused on (Knill *et al.*, 2020) specific policies or policy programs (level of analysis), interested in the degree of integration of distinct policies and policy sectors (research object); examine the extent to which different policy frames, goals and instruments are aligned to one another; both within and across different policy sectors (modality). Policy product integration can also be seen as “law-based integration” which according to Metz *et al.* (2022) is integration on paper.

The focus in “policy product integration concentrates almost exclusively on the policies themselves and whether or not their design is capable of addressing cross-cutting policy challenges” (Knill *et al.*, 2020, p. 10), with the aim to align policy variables (goals, objectives, instruments, etc.) (Candel, 2021). The aim is to create policies that will not be affected by internal contradictions or negative interactions across the different levels of government, including between the instruments, objectives and goals.

The systems-based analytical concepts

This section discusses and synthesises various streams of research on systems thinking and public policy. de Wee *et al.* (2024) make the case that because of the structural similarities between systems, these insights can be exploited for understanding other systems, in this case, how policy product integration can be studied based on the system-theoretic IPA methodology and conceptual systems.

Systems thinking is a construct that helps aid understanding (Cabrera and Cabrera, 2021, pp. 20–21), and according to Shackelford (2014, p. 6), the first step towards effective policy analysis is to conceptualise multiple interconnected policies holistically as a system. Senge (1990, p. 133) added that “systems thinking allows for seeing the structures that underlie complex situations”. This is an important idea for understanding policy integration. Systems approaches can be seen as important lenses to study policy integration, as according to Louie (2017:9), different systems have the same dynamics, and one can use the knowledge arising from any of them to better understand the other system.

It is important to first understand what systems are and how or why policies and their content can be considered systems. According to Von Bertalanffy (1969, p. 33), systems are “complexes of elements standing in interaction”, which can be physical or conceptual or a combination of both (Wallis, 2016). Burge (2004, p. 188) adds detail to the definition, stating that the elements are held together by bonds . . . (and) these bonds are logical in the case of conceptual systems . . . and they are material in concrete systems”. Of importance is that “the collection of the relations among a system’s constituents is its structure” (Bunge, 2004, p. 188). Drawing on the line of soft systems thinking there are various systems-based concepts that are relevant to the study of policy content as systems, for example, *emergence*, described by

Mingers (2015, p. 30) as “Emergent properties of an entity are properties possessed only by the entity as a whole, not by any of its components or by the simple aggregation of the components”. The nature of systems especially living and social systems can be “open systems” in that it has a capacity to exchange information, energy and material in the course of both internal and external transactions (Von Bertalanffy, 1969), which also brings another important concept of systems, which is the idea of *boundaries*, between the system itself and its environment. Ackoff and Emery (1972), stated that the system is bounded and created to achieve its goal(s). Wallis (2020) also discusses that outside the boundary of one system, they can also be *nested* in other systems, describing nested as systems in combination with systems of systems to include the environmental complexity. de Wee (2024, drawing on Wallis, 2013) also made the case that systems are also seen as not static, but *dynamic*, and Ison (2008) argues that components (of a system) co-evolve, and are *nonlinear*, meaning they are interrelated, adapt to the environment and reorganise their internal structure. This basic definition and conceptualisation also apply to policy content with insights from conceptual systems (see Wallis, 2013, 2019), which is useful for studying policy product integration. Vicker’s (1978: 91, 81) is also important to understand systems and subsystems, as he argues that “We can distinguish systems made up of a whole hierarchy of over-lapping subsystems, each exemplifying a different kind of order” and that fundamentally, “understanding of systemic relations may bring us a better understanding of our limitations and even our possibilities”. His work here is important for this contribution as, first it is important to understand policy systems exist as an emergent property of interacting subsystems and that each has some kind of “order” or structure in the language of the IPA, and therefore could bring a better understanding of specific policies to address complex policy problems. This understanding itself is a recognition of the importance of policy makers seeing the “limitations” of existing policies and why “complimentary” policies are more useful in what Vickers (1970, p. 59) term the “appreciative settings” which he equated with our “readinesses of the mind” to see, value and respond.

Policy designs and mixes as systems and interacting systems

In Hall (1993) seminal work, he challenged the dominant view in policy scholarship, which conflated all the elements of policy into a “single variable”, he disaggregated the policy content and developed the taxonomy of policy components. Cashore and Howlett (2007) extended his work and developed the taxonomy of nested policy design components. According to Capano and Howlett (2024:2), “the levels included a high “macro” level of abstract goals and means; middle or “meso” level policy objectives and policy instruments, and “micro” level of policy settings and calibration. Thus, adding three more policy components”. This work was a critical development in the progression of policy design scholarship, “facilitate(ing) greater conceptual and empirical work” (Cashore, 2022:1). This disaggregation of the policy content into various components or elements can also be seen as a system because they interact and create some logic (Howlett and Ramesh, 2023, p. 5). Recent literature also studied policy change based on the policy components. Howlett and Ramesh (2023) studied “static” and “dynamic robustness” looking at how various elements of policies change and made the case that changes allows for adaptation, and the under dynamic robustness allow adjustments, where a policy “modify itself and create new goals and logic” – meaning all the components change in the content of the policy.

According to Migone and Howlett (2024, p. 816) policy mixes, by definition, contain distinct types of policies and policy instruments with different characteristics. These policies do not operate in isolation and often influence each other (Maggetti and Trein, 2022), and according to Cunningham *et al.* (2013:2) policy mix thinking is concerned with the “composition of policies in the mix and how they mutually shape effectiveness . . . in particular the idea of interactions between policies is fundamental in the policy mix concept” or as others argue (Attwell and Navin, 2019; Del R o, 2010), policy mixes are systems of interconnected elements susceptible to simultaneous mutual or reciprocal interactions. They often develop

incrementally over many years (evolve or change) (Kern and Howlett, 2009). Policy mixes research examines multi-policy, multi-goal and multi-tool mixes (Migone and Howlett, 2024), which is used to study policy integration and better understand these interactions. Despite these advancements, Migone and Howlett (2024) make the case that many questions remain, such as how to precisely measure the complex interconnections among policy objectives, means and instruments to better analyse and design policies.

Empirically, there are various studies that speak to the “systems” nature of public policies and their interaction. For example, integration can be explored through policy statements in different policies and how they support and conflict each other (Chinsinga and Chasukwa, 2015) or the interlinkages of legal documents (policies in this paper), focusing on mapping their interactions. According to Pham-Truffert *et al.* (2020, p. 921), this is important because incoherence leads to conflicting goals during implementation. For example, in the law-based integration (content) and policy coherence literature, there is the idea of *embeddedness* and interdependence. Howlett and Rayner (2007) talk about the idea that policies with multiple goals must be able to co-exist and must be mutual or reciprocal. According to Howlett *et al.* (2015), *interactions* in policy mixes can either be in conflict or synergy, where they reinforce each other’s effectiveness. The idea of a “policyscape” by Mettler (2016) argues that no laws are created on a blank slate and that they affect each other’s effectiveness. This is also true for policies, as policyscapes are cluttered with public policies that structure the political order and are susceptible to change from the external socioeconomic environment and the dynamics internal to the policies themselves Mettler (2016, p. 370). O’Conner and Netting (2011) asserted that all policies are *nested* within layers of policies or nested structures of rules within rules, within further rules. Nohrstedt and Weible (2010, p. 8) discuss the notion that “[s]ubsystem boundaries are artificial constructs . . . (and) policy subsystems are interdependent”. The system perspective concurs with the assumption here and is the idea of an *open system*, which is nested and therefore interacts with each other. Policies collectively exist and behave as a system, meaning they are more than the sum of policies (Zambianchi and Biedenkopf, 2024). As Gebara *et al.* (2019, p. 187) defined a policyscape as a “composition of policies in the mix, how they interact to mutually shape each other’s effectiveness in the landscape”. When these different subsystems interact, *emergent* outcomes that “occur at a different level of a system than the level in which the original interaction occurred” (Westhorp, 2012, p. 411). This is in-line with the idea of a macro-causal theory of multiple policies against a single causal theory of a single policy.

For the purpose of this paper, a policy landscape can be seen as a product of policy mapping, and interaction assessment that creates a “*spatial distribution of policy components or elements and their inter-sectoral (horizontal) and multi-level interactions (vertical)*”, as the outcome of the mapping policy statement from various policies (de Wee and Ramolobe, 2025). These include, for example, goals, targets and instruments for different sectors and levels of government.

However, little is known about how these policies interplay with one another, if at all (Maor and Howlett, 2022). This requires the analysis of policy interactions, in which this study proposes the systems-based IPA to study policy content as conceptual systems to “understand the relationships between policies and explore their interaction” (Zambianchi and Biedenkopf, 2024:6). Therefore, this study focuses on how these policies interact in a policyscape (Gebara *et al.*, 2019) by studying policy mixes through an interaction-oriented lens (Zambianchi and Biedenkopf, 2024:4), which is also understudied in the literature.

A pathway to studying policy content as conceptual systems

Siddiki (2018, p. 222) suggested using the concept of *intra-policy compatibility*, however, this paper is concerned with policy integration, focusing on policy mixes and therefore the other concept introduced by Siddiki (2020, p. 32) is *inter-policy compatibility*, which refers to the extent of alignment policies that govern common and different subjects, targets and policy

issues. Siddiki (2018, p. 221), from a policy conflict perspective, suggested that to overcome “inter-policy design conflicts, deliberate attempts should be made to map out the policy landscape in which new policies, or iteration of policies are being applied”. In addition, building a policy map can then “enable investigations into the likelihood of negative policy interactions” (Siddiki, 2018, p. 221). Siddiki added that “policy mapping and interaction assessment should formally be incorporated as part of the policy analysis process” by specifically focusing on “evaluating the causal assumption (logical connections between policy elements) underlying policies” (2018, p. 221–222). The idea is that it is possible to diagram the sentences linking together the internal structure of a policy and between policies, and this paper will explore policy content from a *conceptual system* perspective and analyses it using the IPA method.

Conceptual systems and the IPA process: loci and methods for policy integration

The IPA is a six-step process for “deconstructing” conceptual systems (in this case, policy designs) into their causal propositions, mapping those relations and then evaluating the structure of the internal coherence of the map. In this method, we quantify and diagram the structural logic of the conceptual system and find links between the measure of the policy structure and its effectiveness in the real world (de Wee, 2022). The structure is expressed as a percentage and for the purpose of this paper, a proxy to how “integrated” a policy landscape is. In the case of public policy, these are policy directives, statements or propositions found in the policy. In conceptual systems, the concepts are placed in circles/blocks and the connections (representing the interaction) are represented using arrows.

As a brief overview, those steps are presented here. From Wallis (2016, p. 585) the terms are defined below:

- (1) *Identify* propositions within one or more conceptual systems (models, etc.).
- (2) Diagram those propositions with one box for each concept and arrows indicating directions of causal effects.
- (3) Find linkages between causal concepts and resultant concepts between all propositions (integrate propositions where concepts overlap).
- (4) Identify the total number of concepts (to find the complexity).
- (5) Identify concatenated/transformational concepts (concepts with two or more arrows pointing to it).
- (6) Divide the number of concatenated concepts by the total number of concepts in the model (to find the systemicity).

For an abstract example, consider the two policy statements from two different policies:

Using Figure 1 to evaluate the hypothetical policies with the IPA, policy 1 has a complexity of 3 and policy 2, a complexity of 2. Both has a systemicity of zero. However, the policy map of

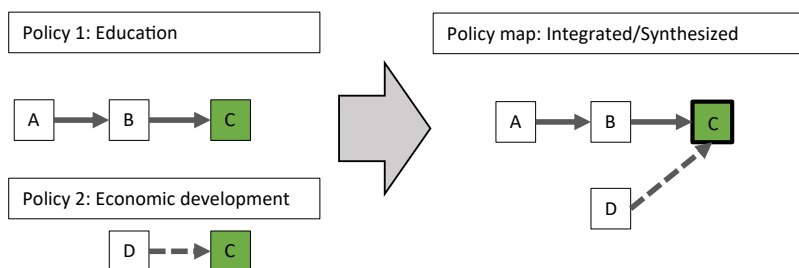


Figure 1. Abstract representation of two the “integration” of two policies. Source: Adapted from Wallis (2019)

the integrated synthesised policy interaction has a complexity of 4 and a systemicity of 0.25, or 25% structured. Policy 1 and 2 together are more useful for achieving in practical application than policy 1 and 2 separately.

Systemicity is a “measure of holism” (Wallis, 2013, p. 24); for the purpose of the current study, this will be an indicator/measure of integration between policies. Thus, in policy analysis, the formal measure of structure provided by the IPA (see de Wee, 2024) offers an additional lens through which we can measure policy product integration. The argument is that one can use IPA to investigate the policy statements (paragraphs and sentences) of a policy design and how systemic it is or how it all works together internally and their interaction as a system (or its structure).

An illustrative case study on nutrition: three selected Nigerian policies

Research method and design approach

This paper is a qualitative study adopting a case study approach. The case selection for the illustrative case is made up of 3 purposefully selected policies from Nigeria. The policies are: (1) the Agricultural Sector Food Security and Nutrition Strategy 2016–2025 (ASFSNS), (2) National Social Protection Policy (NSPP) 2017 and (3) National Policy on Food and Nutrition (NPFN) 2016–2025. These policies were purposefully chosen because they focused on food security and nutrition. The selection of these policies is based on the fact that nutrition and food security exhibit a multi-dimensional aspect, which includes various government departments in different policy sectors. Therefore, their selection is based on their illustrative capacity for the purpose of applying the IPA in a system of integrated policies. These policies are all publicly available and downloaded by the author. These policies are important, according to Billings *et al.* (2021), because they provide a pathway to address nutrition priorities and align the nutrition policy agenda in Nigeria. Additionally, motivation for the selection of these policies is because they are “cross-over” documents focusing on nutrition and food security. These policies are also housed in various departments or ministerial jurisdictions and focus on different areas, including social, agriculture and nutrition, all of which deal with nutrition and the governance thereof in Nigeria. Therefore, the selection of the policies is only “identified” in the paper of Billings for its applicability to the purpose of the current paper. The application of the IPA for the analysis of the policies, including the findings, in part, is independent of the previous study.

Analytical approach

In the analysis, each policy was analysed based on its goals, and for the purpose of this study, goals were defined on a continuum based on the work of Petek *et al.* (2022). They argue that policy goals do not “comprise a single-lined hierarchy”, but rather are on a continuum according to their technical dimensions, which include policy goals, objectives and specifications (Petek *et al.*, 2022, p. 732). Identifying the policy goals, each policy was analysed using the IPA and mapped according to its causal propositions using the causal markers in the text, exercising step 1 of the IPA. The propositions are tabulated in an Excel spreadsheet, Appendix. Thereafter, the map of each policy’s goals is created. Here, the Excel spreadsheet with the causal data is entered into the mapping software kumu.io for visualisation of the system. After each policy is mapped individually in the case study, the data (different causal statements in an Excel spreadsheet) are integrated based on overlapping concepts in the different policies, and a larger map is created of the “integrated” policy landscape. This is based on the interaction of different policies based on policy statements. The larger policy landscape is then developed and mapped.

From the IPA analysis, a policy landscape is created as seen below in Figure 2. Based on the mapped policy statements, the map is created to visualise the different policy goals and their

Integrated Policy Map: Nigerian Case

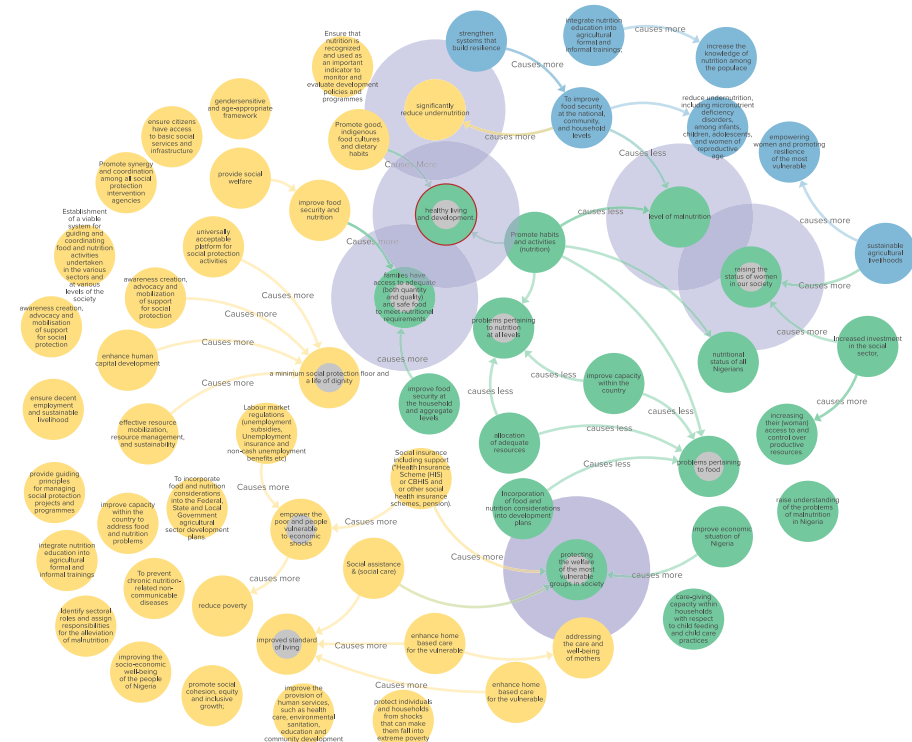


Figure 2. Integrated map of Nigerian policy goals. Source: Author’s own creation, available at: <https://kumu.io/Guswn/integrated-map-nigerian-case>

interactions; each policy is assigned a different colour in the map. See Table 1 for the intra-policy analysis of individual policies based on the IPA application.

The policy in ASFSNS (7 circles) is blue, the NSPP (18 circles) is orange (dark yellow) and the NFSN (37 circles) is green. The total complexity of the map is 62, and the concatenated concepts (the circles with a grey spot inside it), is 7, thus the systemicity is 0.11. On the map the concepts/circles with the “purple shadows” are the concepts where there is an overlap between policies – it indicates interaction. This has external validity to existing studies, which have been found to be less than 0.25 (Wright and Wallis, 2019; de Wee, 2020, 2024; de Wee and Asmah-Andoh, 2022), as well as construct validity in terms of the application of the IPA.

Table 1. Intra-policy analysis based on “systems” measures identified

Individual policy	Complexity	Concatenated	Systemicity	Orphans
ASFSNS	7	0	0	0
NSPP	18	6	0.33	2
NFSN	37	3	0.08	18

Source(s): Author’s own creation

The analysis also shows how policies, based on their complexity and systemicity, differ; for example, the NSPP has a systemicity of 0.33, which is 33% structure in percentage terms. This is relatively high and is similar to the systemicity of the successful Finland Homelessness policy, which was 0.35 (de Wee, 2025). Another aspect that emerges here, different from previous studies by Wallis and others, is that the concatenated concepts in the individual policies adds up to nine concepts and in terms of “overlapping” concepts, as identified by the purple arrows, are only six. This could also prove that the policies were developed focusing “inward” instead of having regard for the other policy subsystems and how they ought to interact to decrease the complexity of the problem through “integration”.

Analysis of the emerging map

What is apparent from the integrated map is the fact that the “integration” increases the number of concepts that are concatenated in general, as predicted by Wallis (2019). They also increase the number of arrows/causal relationships in the landscape, which, according to de Wee and Asmah-Andoh (2022), is important for increasing the effectiveness of the policies. However, from an individual policy perspective, the most unstructured policy is the NSPP (yellow), as there are various orphan elements with no relations to other elements. This could make implementation difficult because without a causal relationship that answers the “by who” or “how to do it” or “by when” the implementation of it would be difficult.

Based on the policy landscape, there are only six (6) instances of “*overlap-interaction*” between the different policy goals, which are indicated by the purple shadows around the concepts/circles. In this case, overlap interaction simply indicates instances on a policy map where two or more different policies have causal arrows pointed across different documents. The overlap-interaction is identified as the elements in the system where the different subsystems (individual policies) overlap in the elements they address. This is the focus of this paper, using the IPA to study policy content as a conceptual system to enable the study of policy product integration. Here, the overlap interaction is 6 against the 62 concepts, which is an integration of 0.09. From a system perspective, this indicates a very low level of structure that, in percentage terms, is 9% integrated. For policy product integration, the overlap between policy statements external from each other is seen as “concatenated” as they interrelate or interact and therefore indicates “integration” and which systemicity will act as the proxy for “integration”. The analysis is congruent with the findings of Billings *et al.* (2021), who found that there was a lack of clarity in the objectives and very limited alignment or coherence between the different policies. Billings *et al.* (2021, p. 1578) reported a “lack of coherence for nutrition was more prevalent in policies and programmes in Nigeria” and found cases where nutrition indicators were missing or stated in only some objectives and with inconsistency in target populations. *Overlap-interaction* as identified through the inter-policy arrows interactions (two different colours connected to the same or different concepts) based on the IPA methodology creates a useful mode of interaction to identify and study various policy components, for example, policy means, instruments, objectives, etc. The concept of overlap-interaction provides a lens through which different policy components in a larger mix overlap.

In terms of policy integration, what the IPA allows using its measure of systemicity to map “overlap-interactions” between policies is that it provides a useful pathway to study policy product integration, which has been largely under-studied. The inter-policy analysis also helps identify the key policy instruments, objectives and policy targets, which is useful information to policy practitioners as it helps identify where policies converge and where there are leverage points. Leverage points in that the money spent in terms of the “instruments” used can compound the possible outcomes as more than one policy or department. Additionally, it can help “integrated structures (and policies) to create common organisational elements and to merge professional practices and interventions” (Cejudo and Trein, 2023). In terms of governance, it provides, at least conceptually government departments with a kind of a “a new

policy in which individual components (policies) work under a new logic . . . [to] make decisions based on the needs and priorities of the set of policies and organisations being (with) overall logic that would determine decisions such as targeting, budgeting, etc.” in which the integrated map with overlap-interactions could act as a guiding framework so that “. . . decisional logic applied at every level of management and stage of the policy process”. They continue that this require “. . . at every moment of the policy process decision are made based on a new policy (and) . . . decisions are based on the integrated policy not the individual components (policies) (Knill *et al.*, 2020, p. 11)”.

From this brief analysis, it is important to note that the focus of the illustrative case was to identify interactions between different policies based on their policy statements to create a policy landscape; it is not to evaluate their effects on the ground. The focus is on the output or product of policy-making, focusing on policy goals. The analysis aims at conducting and presenting a preliminary exploration of the method or approach for studying policy product integration. The analysis did not examine the details of each of the elements (concepts) in the policy landscape or each of the causal relationships (arrows) between the concepts or policies.

Summary and discussion

In this section, we discuss the various possibilities of the IPA for the study of policy product integration based on its analysis as a conceptual system. While this is a preliminary study, a few additional insights might emerge, such as the various types of descriptive analytical capabilities of the IPA for identifying various modes of interaction in the policy landscape and potential ways to measure policy integration, fragmentation and potential implications for governance.

Universal language for policy product integration

Remember that inter-policy compatibility is important for policy integration. This is because different policies can be analysed with the IPA and mapped based on the policy statements and the idea that, because they all have propositions (statements), it becomes the generalisable feature between policies (in a policy mix), which, as discussed earlier, makes policies as conceptual systems amenable to the IPA. Two important aspects emerge here. First, the IPA can be used to study policy statements based on their propositions internally to the policy itself (intra-policy compatibility) and how different policy statements interact between policies, based on their causal relation and fundamentally allow for inter-policy assessment and to understand how these statements fit together. The example here is illustrative that studying policies as a conceptual system based on its text, the IPA becomes a tool providing a “common language” between different policies, enabling analysis and evaluation of the “integration” among overlap-interacting and nested policies and across policy subsystems. For example, [Figure 3](#), see an excerpt from the Nigerian case below, where the agricultural and the nutrition policies both address the same concept of “level of malnutrition” both discussed in each policy individually, but provide different instruments to achieve the goal.

The strength of the IPA analysis is in its ability to study the structural logic of policy design content as a system of integrated subsystems, providing a reasonably objective path to study policy product integration among various policies in a policy landscape.

Building policy landscapes through overlap-interactions of policy content

The IPA, which studies policy coherence, specifically focuses on the importance of concatenated concepts/elements as it establishes structure. For policy product integration, concatenated elements are those that “overlap” with the content of other policies. It is similar to what [Cejudo and Michel \(2017, in their 2023, p. 4\)](#) argue that from an implementation perspective, policy integration entails the implementation a concatenation of causal theories “. . . not just the causal theory that guides each policy” and that “. . . implementing an integrated

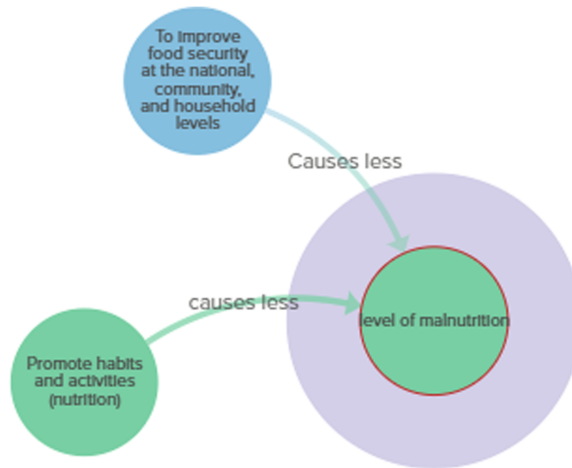


Figure 3. Experiment of overlap-interaction between policy elements. Source: Author’s own creation

policy requires the simultaneous implementation of different causal theories . . . or a macro-causal theory that sets out how these different components fit and interact”. Policy mapping allows for the building of policy landscapes that can be analysed. In their study (Cejudo and Michel, 2017), they found that even when individual policy policies are designed well, they cannot compensate for the lack of theory (causal structure) specifying how the components work together. What is clear from this case is that policy design as content can be seen as conceptual systems that makes it amenable to the IPA methodology and can be extended to policy product integration because the focus is on propositions [1] found in text that can be seen as a “common language” between different kinds of policies in adjacent sectors. The IPA and mapping policy landscapes allow us to study the *embedded or nested relationships* between different policies.

Modes of interaction and degrees of integration: a system perspective “what to look out for?”

Policies can be seen as complex systems that are greater than the sum of their parts (Cairney and Geyer, 2015:2), and the interactions of policies are nonlinear and difficult (Howlett and Rayner, 2013). The systems-based IPA method with its mapping properties can be used as a useful approach to deal with these complex nonlinear systems. Importantly, mapping helps to visualise the systems (policy landscape) and make insights more accessible (Wallis, 2020). Deconstructing the policy statements and reconstructing them in a map, which makes the policy landscape larger, also allows for establishing the causal structure of the system as a “whole”.

Based on the maps constructed using the IPA, it is also possible to study various important characteristics. For example, based on the causal relations found in single sentences or inter-sentential within a policy or between policies, the study of several types of interactions.

Consider, for example, counterproductive and synergistic (reinforcing) interactions. The IPA focuses not only on causal relationships but also on directional effects such as causing “more” or “less” which are generally indicated with the words or a plus and minus sign. A *counterproductive* example, in a study by de Wee (2024), he studied Scotland’s Alcohol policy and found that they wanted to decrease the alcohol outlet density to decrease alcohol consumption; however, the licencing regime focused on approving more licences, which had

conflicting or counteracting effects. In such a case, there will be both positive and negative aspects to the concept of alcohol consumption. Policies can also be *reinforced*, where a single concept has two or more arrows pointed to it, from two or more different policies. For example, using antismoking information campaigns and tax increases on smoke can reinforce the outcome and discourage nonsmokers from starting smoking. Some elements of a policy on the map may not have any arrows pointed to or from them. These are called *causal orphans* (see various yellow ones in Figure 1). A study on the Drakenstein human settlement policy in South Africa identified various orphan concepts in the policy (de Wee, 2020). For example, after many farmers started retrenching their workers, meaning they had to vacate the farms the workers stayed on, the government was forced by the courts to include “emergency housing” for farmers in their policy. This however had no interaction with the rest of the policy, and till today, people face many challenges regarding homeless farmworkers. Finally, *accidental interactions* could also occur, in which policies that might not explicitly mean to interact, but their interaction is analysed based on its structural logic, using the IPA.

In terms of degrees of integration, what emerges is the idea of *density* (more elements and arrows on the map), *integration* (more causal relations and their interaction between the elements on the map) and *fragmentation* (few-to no interactions between the elements in the map) of the mapped landscape can also be deduced. For example, when there are many overlapping-interactions between policies and arrows, there is greater connectivity between the policy elements. This is the interconnectivity of the structural logic, which indicates the density. The proposition here is that the more hyperlinked or embedded the policy landscape is, the more integrated the policy is. The example of Nigeria indicates limited density or integration because it has a systemicity of only 0.09. The less the number of interlinkages between the various policy elements/concepts, the more fragmented. For example, if a policy has too many causal orphans, it has fewer connections if it has many counteracting relationships that could also increase its fragmentation.

Figure 1 indicates that the NSPP policy has many interactions in terms of the arrows directed at the various concepts, compared to the ASFSNS (blue circles on the map). The ASFSNS has fewer interactions in terms of the map and therefore, the density of the NSPP is higher compared to the density of ASFSNS. Furthermore, the NFSN has many “orphan” concepts and relatively fewer arrows compared to the concepts, which also show a lower level of density. As such, the ASFSNS and NFSN are more fragmented in comparison to NSPP. Overall, in the map, the arrow that point to “overlapping-interactions” are few and therefore is also showing that the integrated map has relatively lower density.

Implications for research and practice

In terms of the current study, the IPA is applied intra-policy, which is a full application in each policy. Thereafter, the different policy concepts are mapped in an Excel spreadsheet identifying the “elements” (the concepts identifying instruments, target populations, policy targets, etc.) and the concepts that are similar across the policies are highlighted and integrated into a larger map. Thereafter, the policy map is created to visualise the “systemic interactions” on the map using various measures to understand the systemic interactions between policy subsystems. Future research could apply the IPA on other policies in other contexts and compare, for example, the policy product interaction (on paper) to the actual implementation in practice. The study should focus on organisational arrangements across various government department, how budgeting is done and its relation to setting “departmental” priorities that should be in service of the larger policy goal or “integrated” goal. Using the policy product integration approaches Institutional Grammar and IPA, this paper suggests that focusing on the structural logic and the development of policy landscape of integrated structural logics allows for a more granular and in-depth analysis of the different components of the design (Capano and Toth, 2023) and between design. Inter-policy compatibility and inter-policy conflict concepts (Siddiki, 2018, 2020) allows for

conceptualising the analytical locus in which the content of policies becomes an abstract unit of analysis with implications for policy and governance.

Furthermore, for public policy process researchers, it could be important to study different policies and measure how the “larger” map or policy landscape changes as the individual policies evolve. To maintain the highest level of structure in the conceptual situation could prove useful in the action situation or policy implementation as it provides a guideline and framework of common policy objectives and action leading to “overlapping” outcomes. The policy landscape based on the systems insights provides policy makers with diagnostic tools to identify potential gaps and policy fragmentation, which could negatively impact other policies. For example, one can study the counter-productive interactions, compare them to reinforcing interactions and diagnose the “areas” of policy clashes. Policy makers can use accidental interactions to identify possible unintended consequences or “new interactions” that are synergic that were not seen previously. For policymakers, it would be useful to use the IPA to map the policy landscape of their environment, where they can continuously “compare” new amendments with the existing landscape to make sure it is “reinforcing” to other policies and also help early detection or ex ante detection of unintended consequences. This is in line with [de Wee et al. \(2024, p. 10\)](#), who hold that “systems insights of the IPA are that through building policy maps as an abstractable unit of analysis (using the propositions found in policies), it allows for policy makers or academics to build policy landscapes, which can help investigate possible policy trade-offs. These implications could be valuable for policy integration or policy coherence, which is predicated on the idea of policy compatibility”. What is important about policy landscapes is that they become institutions that govern the behaviour, resources and relationships between different administrative units in a multilevel governance system ([de Wee and Ramolobe, 2025](#)). This type of research, based on policy content, provides a nuanced framework as it describes governance arrangements of a country and hence suggests the import insight of IG 2.0 and IPA for policy integration and the descriptive, analytical and diagnostic insights for policy coordination and governance arrangements ([de Wee and Ramolobe, 2025](#)).

This paper, with the focus on policy product integration and its implications for governance, contributes to the debates in this journal, *Kybernetes*, as it fundamentally explores and provides an alternative models of policy integration in complex policy environments, which is the interest of the journal, stating “we are particularly interested in research that explores how choice, contingency and decision-making are structured in conditions of complexity” ([Roth and Sales, 2025a, b](#)). This paper focus on policy product integration, which is essentially about how to improve policy capacity to effectively deal with cross-cutting policy problems, defined by complexity and at times a polycrisis. One way to improve the policy product integration is to look at the work of [Korn \(2026\)](#) on the theory of problem solving, which integrates by design or chance the effort to create the envisaged change. Similarly, to [Korn \(2026\)](#) idea of problem solving by living systems, policies also identify an initial state, a physical or intellectual product (policies) is introduced to generate interaction to change the state (initial conditions). This approach is highly compatible with the proposed IPA, before the IPA is produced, as the dynamic problem-solving is focused on natural language. For deeper and more granular analysis of this language for policy integration, the institutional grammar tool can be used, as seen in [Yang and Jia \(2025\)](#); it helps examine the rules and standards based on the configurations of their syntactic components, for example, how “deontic” and “aim” combinations in policy language can improve policy performance. This perspective of policy product integration for effective governance also has a potentially important role to play in the “The Great Reset” and how government manage and engage in sustainability governance so that it does not reproduce the inequalities or exacerbate them ([Vătămănescu and Dabija, 2026](#)), by being able to identify possible conflicts or counter-acting interactions between policies and overcoming the distinctions between policies that actually has the same policy target populations. Finally, this paper focus on the integration of various policies, situated in various government department and often seen as “sector specific”;

however, future research on policy integration should also be studied in concert with [Roth and Sales \(2025a, b\)](#) concept of “multifunctional organisation” in which is premised on the paradox that we “expect organisations to organise around specific functions, yet we observe organisation that routinely exceed or contradict those expectations”. Based on this paradox, the authors argue that in modern society, these paradoxes are not merely reflected, but are processed, where different logics collide and become the object of structured decision-making ([Roth and Sales, 2025a, b](#)). This led to intersecting multiple policy structural logic and institutional logics, which often give rise to governance dilemmas. For example, different policies have different goals and perceive, for example, the case of food insecurity in different ways, and often this can lead to counterproductive outputs in governance. The concept of multifunctionality is useful for the study of policy integration, as it intends to transcend these individual logics towards a macro-causal policy logic ([Cejudo and Michel, 2017](#)), which create essentially “structural conditions of organisational life in functionally differentiated sub-systems allowing us to move from monofunctional administrative units to acknowledging multifunctionality of institutions and a new ‘norm’” in public policy and governance from a systems-theoretical perspective ([Roth and Sales, 2025a, b](#)). This reframing of government institutions also allows us to overcome the reinforcing nature of functional biases to specific issues ([Roth et al., 2019](#)) and allows us to rethink regulation and governance processes and financing, taking into account the multifunctional nature of policies and organisations dealing with cross-sectoral issues.

Therefore, ideas such as multifunctionality, emergence, feedback and adaptation are important in modern-day societies that are defined by cross-sectoral issues that require policies that are integrated to contend with their complexity. For example, emergence should be built into these policy systems as new problems emerge spontaneously during the problem-solving process. Consequently, even though cybernetics was recognised decades ago in terms of their direct connection with law and communication, it is still not present in policy regulation and control – and in this context policy integration. As such, to address the complex policy problems and the turbulence facing society, insights from cybernetics and Ashby’s Law of Requisite Variety bring important insights to the importance of policy integration in the current context. Ashby’s claim is that a complex problem can only be administered with the same or similar measure of complexity ([Ashby, 1957](#)), for this paper and in the current context of turbulence, having a well-integrated policy landscape could help increase governance capacity to deal with complexity, as it help overcome the “silo” or narrow focus of particular policy sectors – in some sense help deal with uncertainty. The perspective of policy integration and the building of policy landscapes therefore is complementary to the idea of Ashby, as the “integrated policy” becomes an important control mechanism in a variety of ways – especially in turbulent and polycrisis situations. However, [Vickers \(1987\)](#) also reminds us that systems self-regulate if a regulator does not regulate them, and even if they do, not all systems converge into a wanted state.

Practically, government officials can effectively coordinate their subsystems when adopting principles of systems theory and cybernetics. Cybernetic governance can be assisted, where the IPA can act as a meta-regulation, which is based on higher-level coordination, integration and optimisation of multiple subsystems and using the IPA to build policy landscapes, allows us, from a meta-regulation perspective, to identify instability, conflict or inefficiency among the control systems and suggest ways to resolve them ([Zwitter, 2024, p. 9](#)). The IPA allows for the building of policy landscapes through policy mapping and measuring the “stability” in some sense through the measure of structure, and therefore the IPA becomes a control mechanism for maintaining stability in the internal conditions (policy), and therefore allows also to provide adaptive capacity. Finally, the IPA allows us to identify policy incompatibilities or conflicts, but equally, it provides a “common language” between policies through policy mapping of policy statements to help with the structural coupling, which from a policy perspective could be described as horizontal coordination across multiple policy sectors aimed at resolving

cross-cutting issues like food and nutrition security (Trein, 2017). The policy landscape allows us to identify where the different policies converge, and therefore with a more holistic approach to government for improved coordination – although it could also have drawbacks such as increased complexity, administrative cost, policy confusion and uncertainty across different departments.

Concluding remarks

The research applied the IPA to an embedded case study of Nigerian policies that have an impact on food security and nutrition, in which the IPA was used to map the content of the different policies and their interactions. The aim was to conduct and present a preliminary exploration using the IPA to study policy product integration from a conceptual systems perspective, with the aim of proposing the validity and use of the IPA for studying policy integration based on policy content. With a relatively small sample and the exploratory nature of this study, “. . . limits the certainty of the conclusions that may be drawn” (Wallis, 2020, p. 91), which is partly because we are closer to the start of this area than the end.

The research has achieved its purpose of conducting and presenting an exploration of policy integration from a conceptual systems perspective by using the IPA to study and map policies and their interaction based on policy content, adding an additional perspective to the study of policy product integration. In doing so, the paper achieved its objective and presented the IPA and the view that conceptual systems and their systems-theoretic insights can be useful for the study of policy integration. The biggest contribution of this paper for policy analysis and content analysis lies in the IPA’s ability to assess policy interactions across policies based on the overlap-interactions, which become key areas for diagnoses and gauging of possible policy interaction outcomes *ex ante*. The IPA allows for the landscape to be assessed based on its “structure”, which is different from existing content methods, in that it provides for an objective measure of the policy textual content within and across policies and a method to reconstruct the map based on overlapping interactions. It further makes the policy analysis more objective and impervious to politicisation of the policies and subjective interpretation. The contribution lies in the analytical and diagnostic capability that the IPA enables in terms of analysing policy product integration, which has been understudied for a long time.

Based on the illustrative case and synthesis with the existing literature, various modes of interaction and structure of the policy landscape emerged, which could provide insights for governance and public policy. For example, overlap-interactions identified through the IPA provide leverage points for integration where either there is concatenation in the goals (policy integration) or in the means or instruments in the implementation stage. Providing a theory that specifies how the different policies interrelate (Cejudo and Michel, 2017). Further, it can also help identify the roles of various agencies in the multi-level governance system and which goals/objectives they work on together. The causal directions can also help identify synergic, counteracting, accidental or orphan concepts in the policy landscape, which could provide insights for policy designers’ *ex ante*. The structure of the map allows for the analysis of the degree of integration, and the potential to study it longitudinally to trace the evolution or change could also provide insights into the level of integration, from fragmented (various policies relatively distant from each other with few causal arrows on the map such as in the case study) or integrated, which would be the opposite; however, those interactions could also be counteractive. This approach provides a qualitative content analysis of policy mix interactions and their potential impact on governance.

With the measures outlined in this preliminary study, there is certainly potential for investigating, maintaining and updating the larger policy landscape over time. Policy design and their interaction are therefore *inter-temporal* (evolving), meaning that they change and could affect the effectiveness of policies. Based on the decomposition of policy content, it is possible to analytically observe the interaction over type and visualise the policy dynamics over time (Howlett *et al.*, 2024). From an IPA and policy statement

perspective, it is possible to study the change based on policy layering that includes patching (new statements without readjusting previous policy), packaging (layering new statements while terminating others to readjust previous policy) and calibration (making changes to text within the statements (Ambrose *et al.*, 2024).

As with any methodology, the IPA has limitations. This is more so because the method is in its early stages of development. However, as explored in this paper, the IPA has the capability to study the content of policies and their interactions horizontally and vertically. The IPA is useful for policy product integration in a paper by studying the structure; however, it should not be used in isolation. Existing methods and approaches should also be used; in particular, data should be used both to “establish” the validity of a causal relation and to evaluate the implementation of the causal relation based on data. This will also ground the policies on context-based and relevant data. The IPA focuses specifically on the text and does not “categorise” the text-data into the various components based on Cashore and Howlett’s (2007) taxonomy. This would require a second step in the analysis, which future research could undertake. Further, for the study of the evolution of the policy components and text, longitudinal studies can be conducted where the policy landscape is mapped across various instances of amendments and the effects can be studied, which would also allow evidence for the potential of the IPA to evaluate policy based on the interacting propositions in policy text.

Finally, using a systems-theoretic perspective to study the underlying structural logic of policy designs and their interactions allows for the elicitation of key policy insights for policymakers and practitioners.

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Appendix

Table A1. Nigerian food and nutrition security inter-policy connections

From	To	Direction	Label
Enhance human capital development	A minimum social protection floor and a life of dignity	Directed	Causes more
Promote habits and activities (nutrition)	Problems pertaining to food	Directed	
Enhance home-based care for the vulnerable	Improved standard of living	Directed	Causes more
Enhance home-based care for the vulnerable	Improved standard of living	Directed	Causes more
Strengthen systems that build resilience	To improve food security at the national, community and household levels	Directed	Causes more
Provide guiding principles for managing social protection projects and programmes	Provide guiding principles for managing social protection projects and programmes	Directed	Orphan
Sustainable agricultural livelihoods	Empowering women and promoting resilience of the most vulnerable	Directed	Causes more
Promote habits and activities (nutrition)	Level of malnutrition	Directed	Causes less

(continued)

Table A1. Continued

From	To	Direction	Label
Integrate nutrition education into agricultural formal and informal trainings	Increase the knowledge of nutrition among the populace	Directed	Causes more
Effective resource mobilisation, resource management and sustainability	A minimum social protection floor and a life of dignity	Directed	Causes more
Incorporation of food and nutrition considerations into development plans	Incorporation of food and nutrition considerations into development plans	Directed	Orphan
Social assistance and (social care)	Protecting the welfare of the most vulnerable groups in society	Directed	Causes more
Improve food security and nutrition	Families have access to adequate (both quantity and quality) and safe food to meet nutritional requirements	Directed	Causes more
To improve food security at the national, community and household levels	Level of malnutrition	Directed	Causes less
Provide social welfare	Provide social welfare	Directed	Orphan
Social insurance including support (*Health Insurance Scheme (HIS) or CBHIS and or other social health insurance schemes, pension)	Protecting the welfare of the most vulnerable groups in society	Directed	Causes more
Improve food security at the household and aggregate levels	Families have access to adequate (both quantity and quality) and safe food to meet nutritional requirements	Directed	Causes more
Promote synergy and coordination among all social protection intervention agencies	Promote synergy and coordination among all social protection intervention agencies	Directed	Orphan
Promote habits and activities (nutrition)	Nutritional status of all Nigerians	Directed	Causes more
Social assistance and (social care)	Improved standard of living	Directed	Causes more
Ensure decent employment and sustainable livelihood	Ensure decent employment and sustainable livelihood	Directed	Orphan
Raise understanding of the problems of malnutrition in Nigeria	Raise understanding of the problems of malnutrition in Nigeria	Directed	Orphan
Allocation of adequate resources	Problems pertaining to food	Directed	Causes less
Promote habits and activities (nutrition)	Level of malnutrition	Directed	Causes less
Increased investment in the social sector	Increasing their (woman) access to and control over productive resources	Directed	Causes more
Ensure citizens have access to basic social services and infrastructure	Ensure citizens have access to basic social services and infrastructure	Directed	Orphan
To prevent chronic nutrition-related noncommunicable diseases	To prevent chronic nutrition-related noncommunicable diseases	Directed	Orphan
Care-giving capacity within households with respect to child feeding and child care practices	Care-giving capacity within households with respect to child feeding and child care practices	Directed	Orphan
Enhance home-based care for the vulnerable	Addressing the care and well-being of mothers	Directed	Causes more
Sustainable agricultural livelihoods	Raising the status of women in our society	Directed	Causes more
Promote habits and activities (nutrition)	Problems pertaining to nutrition <i>et al.</i> levels	Directed	Causes less
To improve food security at the national, community and household levels	Significantly reduce undernutrition	Directed	Causes more

(continued)

Table A1. Continued

From	To	Direction	Label
Incorporation of food and nutrition considerations into development plans	Problems pertaining to food	Directed	Causes less
To improve food security at the national, community and household levels	Significantly reduce undernutrition	Directed	Causes more
Improve capacity within the country	Problems pertaining to food	Directed	Causes less
Addressing the care and well-being of mothers	Addressing the care and well-being of mothers	Directed	Orphan
Promote good, indigenous food cultures and dietary habits	Healthy living and development	Directed	Causes more
Increased investment in the social sector	Raising the status of women in our society	Directed	Causes more
Allocation of adequate resources	Problems pertaining to nutrition <i>et al.</i> levels	Directed	Causes less
Promote habits and activities (nutrition)	Healthy living and development	Directed	Causes more
Promote social cohesion, equity and inclusive growth	Promote social cohesion, equity and inclusive growth	Directed	Orphan
Empower the poor and people vulnerable to economic shocks	Reduce poverty	Directed	Causes more
Universally acceptable platform for social protection activities	A minimum social protection floor and a life of dignity	Directed	Causes more
Improve capacity within the country	Problems pertaining to nutrition <i>et al.</i> levels	Directed	Causes less
Increased investment in the social sector	Increasing their (woman) access to and control over productive resources	Directed	Causes more
Improve food security and nutrition	Families have access to adequate (both quantity and quality) and safe food to meet nutritional requirements	Directed	Causes more
Social insurance including support (*Health Insurance Scheme (HIS) or CBHIS and or other social health insurance schemes, pension)	Empower the poor and people vulnerable to economic shocks	Directed	Causes more
Improve food security and nutrition	Improve food security and nutrition	Directed	Orphan
Improve economic situation of Nigeria	Protecting the welfare of the most vulnerable groups in society	Directed	Causes more
Strengthen systems that build resilience	To improve food security at the national, community and household levels	Directed	Causes more
Labour market regulations (unemployment subsidies, Unemployment insurance and noncash unemployment benefits, etc.)	Empower the poor and people vulnerable to economic shocks	Directed	Causes more
Awareness creation, advocacy and mobilisation of support for social protection	A minimum social protection floor and a life of dignity	Directed	Causes more
To improve food security at the national, community and household levels	Reduce undernutrition, including micronutrient deficiency disorders, among infants, children, adolescents and women of reproductive age	Directed	Causes more
Provide social welfare	Improve food security and nutrition	Directed	Causes more
Provide guiding principles for managing social protection projects and programmes	Provide guiding principles for managing social protection projects and programmes	Directed	Orphan

(continued)

Table A1. Continued

From	To	Direction	Label
Integrate nutrition education into agricultural formal and informal trainings	Integrate nutrition education into agricultural formal and informal trainings	Directed	Orphan
To incorporate food and nutrition considerations into the Federal, State and Local Government agricultural sector development plans	To incorporate food and nutrition considerations into the Federal, State and Local Government agricultural sector development plans	Directed	Orphan
Ensure that nutrition is recognised and used as an important indicator to monitor and evaluate development policies and programmes	Ensure that nutrition is recognised and used as an important indicator to monitor and evaluate development policies and programmes	Directed	Orphan
Gender sensitive and age-appropriate framework	Gender sensitive and age-appropriate framework	Directed	Orphan
Establishment of a viable system for guiding and coordinating food and nutrition activities undertaken in the various sectors and at various levels of the society	Establishment of a viable system for guiding and coordinating food and nutrition activities undertaken in the various sectors and at various levels of the society	Directed	Orphan
Improve the provision of human services, such as health care, environmental sanitation, education and community development	Improve the provision of human services, such as health care, environmental sanitation, education and community development	Directed	Orphan
Protect individuals and households from shocks that can make them fall into extreme poverty	Protect individuals and households from shocks that can make them fall into extreme poverty	Directed	Orphan
Improve capacity within the country	Improve capacity within the country	Directed	Orphan
Awareness creation, advocacy and mobilisation of support for social protection	Awareness creation, advocacy and mobilisation of support for social protection	Directed	Orphan

Source(s): Author's own creation

Note

1. A proposition can be seen as “a declarative sentence expressing a relationship among some terms” (Van de Ven, 2007, 117). All policy documents are composed of policy statements characterised by propositions; it is possible to analytically map all policies based on their propositional statements (policy directives) and determine their structural logic (de Wee, 2025)

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Further reading

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